24995

435.36
06/30/2005
Rev. 06

FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFA/CO)
NEW SITE IDENTIFICATION (NSI)

Part A – NEW SITE IDENTIFICATION INFORMATION (To be completed by the Task Lead for New Site)	
1. **Site Title:** **Shallow Injection Well 14-TRA IDWR#22 TRA FD14 Northwest Corner TRA-616** (Use known common names, location descriptors and or processes near or associated with the suspected inactive waste site.)	**Site Code:** **TRA-68** **NSI Evaluation Initiation Date:** July 18, 2003
2. **Task Lead For New Site:** Wendell Jolley	Phone: 526-5990
3. **NSI Coordinator:** Nielsen Burch	Phone: 526-5676
4. **Initiator or Initial Observer:** Paul V. Hehn	Phone: 526-8886

5. **Description of Suspected New Site and Location:** (A location map and/or diagram identifying the site against controlled survey points or global positioning system descriptors may be included. Document all existing information including historical, process, screening data, analytical data, radiological surveys etc. Attach supporting documentation)

This new site identification (NSI) form is for a shallow injection well at the Test Reactor Area (TRA). This well was identified in a correspondence dated 1/3/03 to Mike Piechowski at the Idaho Department of Water Resources (IDWR) from Ron Guymon, Director, BBWI Environmental Affairs. This correspondence also indicates that new site identification forms will be submitted, and provides information concerning the function/description of the wells. For the purposes of this NSI form, the shallow injection well is identified at the top by the Site Title which includes: shallow injection well, the record number and facility identifier, the IDWR Record Number, the well name, and location.

This well, located at the northeast corner of building TRA-616, is a buried 55-gallon drum filled with gravel and covered with a steel grate, and received steam condensate from the TRA/MTR steam generation system. The steam condensate lines have been removed. This shallow injection well is considered inactive.

The TRA/MTR steam generation system provided high-pressure steam to various TRA facilities. The Steam Plant, located in TRA-609, was originally commissioned as part of the MTR support facilities in 1950. The TRA/MTR Steam Generation System has been removed from service and is no longer in use (EDF-1983 Voluntary Consent Order Tank System TRA-017 -- TRA/MTR Steam Generation System Characterization). Tanks and some piping within this system were assessed under the Voluntary Consent Order (VCO) in 2002. The TRA/MTR steam generation system components evaluated under the VCO program includes #2 boiler (98TRA00421), #1 east boiler (98TRA00422), #3 west boiler (98TRA00423), deaerator tank (98TRA00424), phosphate tank (98TRA00425), sulfite tank (98TRA00428), and two fuel oil tanks (98TRA00462 and 98TRA00463). The results of this assessment determined that boilers #1, #2, and #3, deaerator tank, phosphate tank, and the sulfite tank are empty, and the associated piping and ancillary equipment within the system are empty. The two fuel oil tanks, and associated piping were determined to be nonhazardous and have a low potential for release. All these tanks and piping were determined to be nonhazardous and were moved to Appendix C of the VCO Action Plan – Covered Matters that are Closed (Letter and Appendix C of VCO).

The steam, condensate piping, and associated injection wells were not included in the VCO assessment (INEEL 2001 Voluntary Consent Order SITE-TANK-005 System Identification, TRA/MTR Steam Generation System (TRA-017), INEEL/EXT-2000-00037, Book 1-TRA, Volume I, Revision 1, September 2001). It was assumed that this part of the system was nonhazardous as well, and the condensate system was not evaluated further. Therefore all the shallow injection wells associated with this system would meet the Class V definition (EPA Proposes to Continue with its Existing Approach for Managing Class V Injection Wells, EPA 816-F-01-009, April 2001).

Chemicals that could potentially be present in the condensate system and the wells include sodium bisulfite, and disodium and trisodium phosphate. At the time the system was constructed, no chemical conditioning agents were used. Beginning in 1986, sulfite and phosphate chemical addition tanks were used to provide chemical conditioning for the boiler feedwater. From the sulfite tank, sulfite salts, primarily sodium bisulfite, were added in batches and diluted with demineralized water. The sulfite solution was pumped to the deaerator. Sulfite was used as a boiler feedwater conditioner because of its ability to scavenge oxygen. (INEEL 2001). The phosphate tank was used to add phosphate to the boiler steam drums to act as a corrosion inhibitor. The phosphate salts, primarily disodium and trisodium phosphate, were added in batches and mixed with demineralized water. The chemical solution was then transferred

FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFA/CO)
NEW SITE IDENTIFICATION (NSI)

directly to the boiler steam drums.

These three chemicals are not included as hazardous constituents in 40 CFR Part 261 Appendix VIII and therefore are considered nonhazardous. All three when in water will disassociate into common ions. Therefore these components of the TRA/MTR steam generation system have only contained demineralized water, steam, and sulfite and phosphate salts (INEEL 2001). If sulfite is discharged in effluents or from domestic wastewaters, it readily oxidizes to form sulfate. Phosphate and sulfate salts are both nonhazardous and nontoxic. Both phosphorous and sulfur are essential nutrients for the support of life (NAS 1980). Therefore it is unlikely that this shallow injection well associated with the TRA/MTR steam generation system poses an unacceptable risk to human health or the environment.

6. **Is the site a Solid Waste Management Unit (SWMU) as defined in OSWER Directive 9502.00-6?** ☒ **Yes** ☐ **No**

7. **Recommendation**

☐ Recommend not including as a new FFA/CO site. This site DOES NOT warrant further investigation, does not meet the criteria for acceptance, and should not be included under FFA/CO Action Plan.

☒ Recommend including as new FFA/CO site. This site DOES meet the criteria for acceptance, may warrant further investigation, and should be included under FFA/CO Action Plan.

Recommended Waste Area Group (WAG) and Operable Unit to which site should be assigned:

WAG: 10 Operable Unit: 10-08

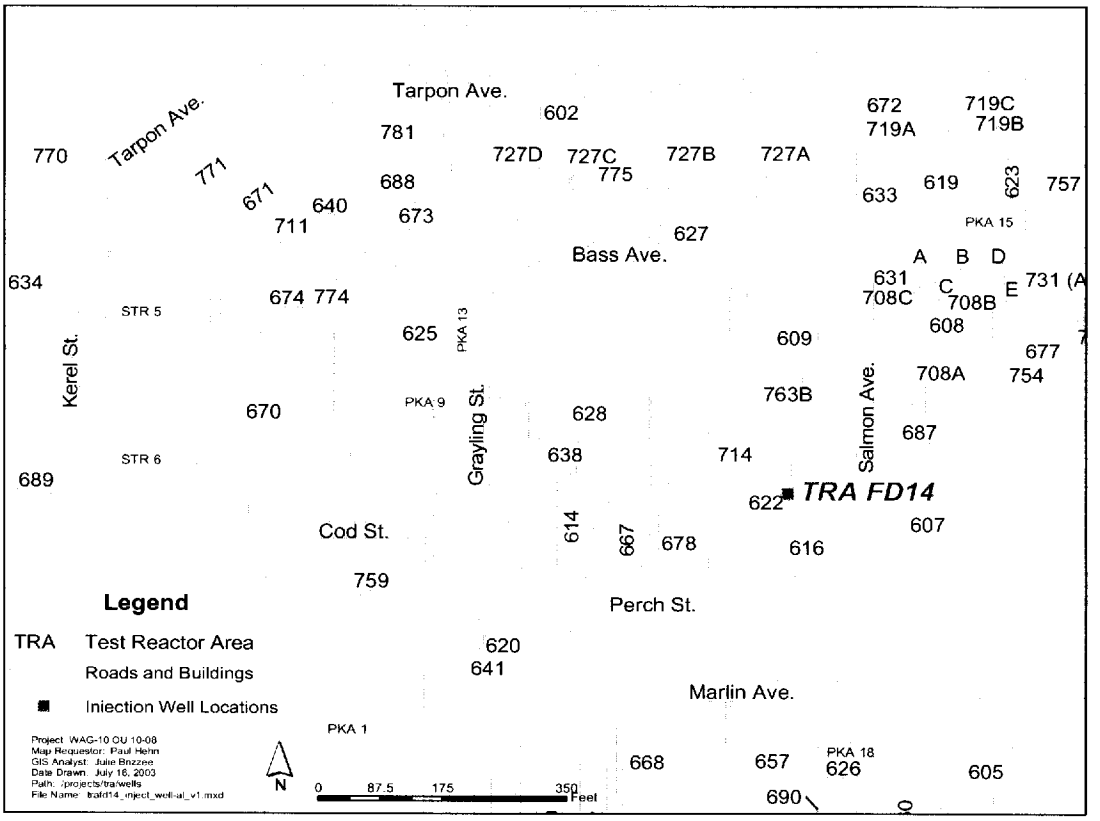
Recommended action for this site:

☒ No Action ☐ No Further Action ☐ Remedial Action under Existing ROD ☐ Track 2 ☐ RI/FS

8. **Responsible Manager Signature:**

Name: Lane Butler Signature: [signature] Date: 9/8/05

FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFA/CO)
NEW SITE IDENTIFICATION (NSI)



FEDERAL FACILITY AGREEMENT AND CONSENT ORDER (FFA/CO)
NEW SITE IDENTIFICATION (NSI)

PART B – FFA/CO RESPONSIBLE PROGRAM MANAGERS (RPM'S) CONCURRENCE

Site Title:	Site Code:
Shallow Injection Well 14-TRA IDWR#22 TRA FD14 Northwest Corner TRA-616	TRA-68

DOE-ID FFA/CO RPM Concurrence: ☒ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature: Richard G. Jensen Date: April 11, 2006

Explanation:

It is very unlikely that any hazardous constituents that would result in an unacceptable risk to human health or the environment were released to this shallow dry well via the steam generation system. Therefore, I agree the site should be added to OU 10-08 as a "No Action" site

EPA FFA/CO RPM Concurrence: ☒ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature: K Matthew Wellborn Date: 5/4/06

Explanation:

Based on the information provided in the section titled, Description of Suspected New Sites and Locations, it appears unlikley that hazardous constituents were released to the environment via the steam generation system.

I concur that this site is a No Action Site.

State of Idaho FFA/CO RPM Concurrence: ☒ Concur with recommendation. ☐ Do not concur with the recommendation.

Signature: Daryl J. Koch Date: 5/01/06

Explanation: All constituents and parts of the system were considered nonhazardous. The only chemicals on record that would have been present in the condensate system or well include sodium bisulfate and disodium and trisodium phosphate. In 1986, sulfite and phosphate chemical addition tanks were used in the system. The sulfite tanks were a source for sulfite salts, primarily sodium bisulfite.

These chemicals are not hazardous constituents in 40 CFR Part 261 Appendix VIII and therefore considered nonhazardous.

The DEQ agrees that it is unlikely that the shallow injection well, and associated steam generation system, poses an unacceptable risk to human health and the environment.